



DENISE CAMPBELL

LANTHANUM

Element Symbol: **La**

Atomic Number: **57**

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Lanthanum (La) is one of the so called rare earth metals but in reality the mineral from which lanthanum is extracted, monazite, is quite plentiful. Lanthanum is a silvery white metal which is quite soft and the extraction process from monazite is simple.

Lanthanum burns at about 150°C and readily reacts with moisture at room temperature to form the hydroxide. It reacts with the halogens and in the fluoride form LaF_3 it can be used for coating glass fibres to give superior reflective properties for the transmission of signals via optical fibre. A major use is in nickel/metal hydride batteries where it is used as the anode. These batteries are used in hybrid cars e.g. the Toyota Prius and hence with the growth of the use of such cars lanthanum will be in significant demand. Both hybrid cars and fibre optics (National Broadband network) find a growing use in Australia.

The atomic number of lanthanum is 57 and its atomic weight is 138.9. It is in group 3 of the periodic table and was discovered in 1839 and in a relatively pure form in 1923. Most modern manufacturing methods use solvent extraction and ion exchange techniques to obtain relatively pure lanthanum.

Provided by the element sponsor David Wood

ARTISTS DESCRIPTION

A soft, grey coloured ink representing the silvery grey metal and contrasts with the energy of the small, bright orange disc – a symbol of energy and movement; the larger multi-ringed circle is used to increase the sense of motion, helping to make the image appear non-static.

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